



# Channel Islands National Marine Sanctuary Sanctuary Superintendent's Report

Volume 5, Number 3



A report for the Sanctuary Advisory Council and Sanctuary Constituents

July, 2007

## ABOUT THE SANCTUARY

Designated in 1980, the Channel Islands National Marine Sanctuary (CINMS or sanctuary) consists of an area off the coast of California of over 1,100 square nautical miles adjacent to the following islands and offshore rocks: San Miguel Island, Santa Cruz Island, Santa Rosa Island, Anacapa Island, Santa Barbara Island, Richardson Rock, and Castle Rock, extending seaward to a distance of six nautical miles. The islands vary in distance from 12 to 40 nautical miles offshore from Santa Barbara and Ventura counties in southern California.

A fertile combination of warm and cool currents in this area results in a great variety of plants and animals including kelp forests, fish and invertebrates, pinnipeds, cetaceans and sea birds. The sanctuary also has a wealth of maritime heritage resources including Chumash Native American artifacts and over 100 historic shipwrecks. Human uses in the area include commercial and recreational fishing, marine wildlife viewing, boating, diving, kayaking, maritime shipping, nearby offshore oil and gas development, research and monitoring, and numerous educational activities.

## CONTENTS:

Resource Protection.....	1
Sanctuary Advisory Council .....	2
Management Plan Review.....	3
Emergency Response .....	3
Vessel & Aircraft Operations .....	3
Research & Monitoring .....	5
Education, Volunteer, & Outreach .....	7
MERITO .....	9
Channel Islands Argonauts .....	11
Channel Islands Naturalist Corps.....	11
Spotlight on Volunteers. ....	13
Maritime Heritage Program.....	15
Stories From the Past. ....	16
Web Site .....	18
NOAA and NMSP News.....	19
Three-month Sanctuary Calendar.....	21

## RESOURCE PROTECTION

### Marine Reserves Process

#### *Final Rule for Federal Marine Reserves*

NOAA has released a Final Rule and Final Environmental Impact Statement (FEIS) for the establishment of marine reserves and conservation areas within the CINMS. The purpose of this action is to maintain the natural biological communities, and to protect, restore and enhance natural habitats, populations, and ecological processes. This action complements the State of California's establishment of a network of marine reserves and conservation areas within the State waters of the CINMS in 2003.

In the Final Rule, NOAA is issuing final regulations for the federal-waters portion of the sanctuary. This action establishes approximately 110.5 square nautical miles of marine reserves, and 1.7 square nautical miles of marine conservation area in the CINMS. All extractive activities (i.e., removal of any sanctuary resource) would be prohibited in marine reserves. Lobster harvest and recreational fishing for pelagic species (with hook and line only) would be allowed within the marine conservation area, while all other extraction would be prohibited.

*(Continued on next page.)*

## Window on the Sanctuary

California sea lion (*Zalophus californianus*) pupping and breeding season runs from May through July. This photo was taken in the sanctuary on June 10<sup>th</sup>, 2007. Photographer: Yvette Fernandez.



To get a copy of the Marine Reserves Final Rule:

- Download the document <http://channelislands.noaa.gov/marineres/main.html> or
- Visit [www.regulations.gov/fdmspublic/component/main](http://www.regulations.gov/fdmspublic/component/main)

Public comments on the state-waters portion of this rulemaking must be received by July 23, 2007. Please submit comments by any of the methods listed below.

- Via email: [cinmsreserves.feis@noaa.gov](mailto:cinmsreserves.feis@noaa.gov)
- Federal e\_Rulemaking Portal: [www.regulations.gov](http://www.regulations.gov). Follow the instructions for submitting comments.
- Via mail: Sean Hastings, Resource Protection Coordinator, Channel Islands National Marine Sanctuary, 113 Harbor Way, Suite 150, Santa Barbara, CA 93109

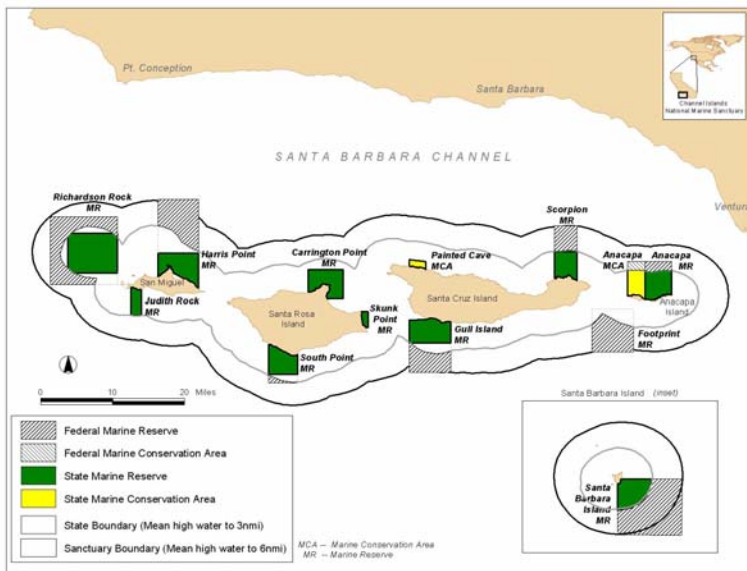
Regulations proposed under this rulemaking are written in a manner so as to avoid unnecessary redundancy with regulations promulgated by NOAA under the Magnuson-Stevens Fishery Conservation and Management Act. The final rule will become effective after 45 days of continuous session of Congress, which is expected to occur on or about July 27, 2007.

NOAA has decided to defer a final decision and is seeking additional comment on the state-waters portion of the sanctuary pending action by the State of California to extend the boundaries of several existing state-waters zones to the three mile state-federal waters boundary.

## SANCTUARY ADVISORY COUNCIL

On May 18, 2007 the Conservation Working Group of the CINMS Sanctuary Advisory Council delivered a final draft report: *Open Ocean Aquaculture in the Santa Barbara Channel: An emerging challenge for the Channel Islands National Marine Sanctuary*. The eighty-page report, developed by members of the Conservation Working Group over the last two years, compiles information on the potential environmental implications and regulatory framework for open ocean fin-fish aquaculture in the Santa Barbara Channel. The report is designed to provide sanctuary managers and stakeholders with a tool for evaluating future aquaculture project proposals in the area. The report proposes ten precautionary recommendations related to environmental standards for open ocean aquaculture, as well as sanctuary involvement in policy development and rulemaking processes. The report is available on line at <http://www.channelislands.noaa.gov/sac/pdf/5-23-07.pdf>.

On July 20th, the Sanctuary Advisory Council will continue consideration of the aquaculture issue, hearing presentations from two experts: Jim Sullivan, and Corey Peet. Jim Sullivan, the NMSP's aquaculture lead, will present information on policies and laws. Corey Peet, an Aquaculture Research Analyst with the Monterey Bay Aquarium's Center for the Future of the Oceans, will present information on the science behind open ocean aquaculture, including environmental risks and potential mitigation strategies. Following these presentations, Sanctuary Advisory Council representatives will consider adopting the Conservation Working Group's report and recommendations.



Once effective, the final rule would implement the federal marine reserves and conservation area shown here.

## MANAGEMENT PLAN REVIEW

Channel Islands National Marine Sanctuary (CINMS or sanctuary) staff continue to analyze and respond to comments received on the sanctuary's Draft Management Plan/Draft Environmental Impact Statement (DMP/DEIS). As staff move ahead with drafting responses to comments, consulting with National Marine Sanctuary Program (NMSP) headquarters and West Coast Region staff and leadership as needed, the draft documents are being modified into a Final Management Plan/Final Environmental Impact Statement. In late July, staff will engage in an intensive "management plan week" designed to address final issues and documentation tasks.

To more fully address graywater and sewage discharge issues from large vessels (greater than 300 gross registered tons), the NMSP is still on track to issue a Supplemental Notice of Proposed Rulemaking and Supplemental Draft Environmental Impact Statement, likely this summer, as a necessary step toward completion of the management plan revision process. CINMS staff have been working closely with the NMSP West Coast Region and NMSP headquarters staff to finalize the documents for National Oceanic and Atmospheric Administration (NOAA) review and clearance.

These supplemental documents will be released in order to ensure that the public has adequate information about and opportunity to comment on the possibility of sanctuary regulation of graywater and sewage discharges from large vessels, and in light of the possibility of inconsistency between the sanctuary's preferred alternative discharge regulation and the recently enacted California Clean Coast Act. The supplemental documents will be made available for public review and comment, and comments received will be considered and integrated into the Final Management Plan/Final Environmental Impact Statement, and a Final Rule.

Sanctuary staff will continue to provide updates on the Supplemental Notice of Proposed Rulemaking, Supplemental Draft Environmental Impact Statement, Final Management Plan, Final Environmental Impact Statement, and Final Rule at upcoming Sanctuary Advisory Council meetings and via the sanctuary's management plan web page:

[channelislands.noaa.gov/manplan/overview.html](http://channelislands.noaa.gov/manplan/overview.html).

## EMERGENCY RESPONSE

### Working With the National Weather Service

CINMS staff met with National Weather Service (NWS) staff on June 21<sup>st</sup> at the NWS office in Oxnard, California. The group discussed collaborative efforts, and NWS staff provided a presentation outlining their products and services, and provided an office tour and demonstration of their forecasting procedures. The NWS is interested in becoming more active in regional emergency response activities. The CINMS staff representative to the Southern California Area Contingency Plan (ACP) committee will be working with the ACP and the U.S. Coast Guard to ensure that the local NWS office is integrated into the incident response phone tree. The NWS has also agreed to give a presentation to the ACP, outlining their response capabilities. NWS also agreed to provide CINMS with forecast confidence levels to assist in decisions for research and other vessel related missions.



CINMS Research Assistant Dani Lipski listens as NWS staff explain how they develop forecasts. Photo: Tina Reed.

## VESSEL & AIRCRAFT OPERATIONS

### Vessel Program Support

During the reporting period the sanctuary's research vessel (R/V) *Shearwater* completed the projects outlined on the following page.



### *Biological Research and Monitoring*

- On-going water quality monitoring in the Santa Barbara Channel with researchers from the University of California, Santa Barbara (UCSB) on May 15 and June 8.
- Seabird and Cassin's auklet monitoring at San Miguel and Prince islands with researchers from the U.S. Geological Survey (USGS) and Carter Biological Consulting, from April 23-24 and June 19-21.
- Xantus's murrelet monitoring at Anacapa Island and Cassin's Auklet monitoring at Scorpion Rock, Santa Cruz Island with researchers from the California Institute of Environmental Studies and USGS, from April 25-26 and June 19-21.
- Nearshore fish assemblage monitoring with Reef Environmental Education Foundation (REEF) volunteer divers, from May 2-4.
- Facilitation of the National Park Service kelp forest monitoring program with Channel Islands National Park (CINP or park) divers, from May 22-25 May and June 4-7.
- Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) dive project with researchers from UCSB, from June 11-14.

### *Social Science Monitoring*

- Private boater surveys tracking use-patterns in the sanctuary, from May 12-13, May 19-20, and June 16-17.

### *Education and Public Outreach*

- Sanctuary resource training for undergraduates from the UCSB Marine Science Institute, on May 16.
- Santa Cruz Island experience including Multicultural Education for Resource Issues Threatening Oceans (MERITO) Academy activities for eighth grade students and teachers from Community Day School, on May 18.
- Teacher Enrichment Adventure in Watershed Education and Training (TEAWET) at Santa Cruz Island with faculty and staff from UCSB and teachers from the area, on June 22.

### **Vessel Maintenance and Annual Inspection**

The R/V *Shearwater* spent the week of May 28<sup>th</sup> at the dock in Ventura Harbor Village undergoing various maintenance activities, and preparations for this

summer's operations. *Shearwater's* mandatory annual Fleet Safety Inspection took place during the sanctuary resource training trip for UCSB undergraduates on May 16<sup>th</sup>. *Shearwater* crewmembers received some very helpful feedback from inspectors regarding specific actions that will help keep the vessel in compliance with updated regulations and make operations safer.

For details on any of the projects listed above, please refer to the relevant section in this Superintendent's Report.

### **Aircraft Operations**

#### *Aviation Water Survival & Aircraft Ditching Training*

In May, Todd Jacobs (Deputy Sanctuary Superintendent), Sean Hastings (Sanctuary Resource Protection Coordinator), Natalie Senyk (Sanctuary Science Advisory), and Dani Lipski (Sanctuary Research Assistant) attended aircraft ditching and water survival training to meet NOAA aircraft safety requirements. McMillan Offshore LLC, a marine safety company based in Louisiana, taught the class. The training very much mirrored a compressed version of the major components of the military Aviation Survival Training Center (ASTC) curriculum. The class included pool training components that covered: the psychology of survival, standard and aircraft personal flotation device use, vessel and aircraft life rafts, in-water survival circles and chains, contaminated water, fire/smoke in-water escape techniques, and in-water exercises simulating an aircraft with passengers entering the water.



Aviation water survival training participants create a "survival circle" to protect injured and weak members. Photo: Rebecca Young.

## RESEARCH & MONITORING

### Sanctuary Welcomes Hollings Scholar for Summer Water Quality Internship

Channel Islands National Marine Sanctuary welcomes our 2007 Hollings Scholar, Crystal Lowe. Crystal comes to us from the University of Alabama where she is majoring in Chemical and Biological Engineering. She is interested in water quality and will be working with our partners at the Southern California Coastal Water Research Project on a project that examines DDT and PCBs in fish tissues. Crystal will be working full time at our Santa Barbara office until the end of July.



Crystal Lowe is studying Sanctuary water quality as a Hollings Scholar intern. Photo: Dani Lipski.

### Research and Monitoring Activities

#### *REEF Fish and Invertebrate Counts Conducted Inside and Outside Marine Reserves*

On May 2nd and 3rd, Laura Francis (Sanctuary Education Coordinator) led a REEF volunteer field survey on board the R/V *Shearwater* to Santa Barbara Island. Five divers, including Francis and Claire Fackler (NMSP West Coast Education Liaison), participated in fish and invertebrate surveys of four sites, and complete nineteen survey forms before returning to the harbor due to poor weather conditions. Participants observed more than 25 species of fish, as well as a variety of invertebrates including lobster and abalone. Surveys focused on areas inside and outside of the Santa Barbara Island state marine reserve. REEF volunteers have conducted 1,593 surveys in the sanctuary since 1997. A

total of 252 volunteers have participated in the data collection, and have conducted surveys at 118 sites (28 of those are within the marine reserves). Of the 1,593 total surveys that divers have conducted, approximately one third (or 516) of the surveys were within marine reserves. In 2006, divers conducted 153 surveys, with 66 surveys conducted within marine reserves. For more information, visit [www.reef.org](http://www.reef.org) or contact [christy@reef.org](mailto:christy@reef.org). July's From Shore to Sea Lecture (see calendar on p. 21) featured the REEF program.



Divers preparing for a REEF fish and invertebrate survey in CINMS. Photo: Laura Francis.

#### *Domoic Acid in Sanctuary Sea Lions Spurs Investigation of a Harmful Algal Bloom Event*

NOAA's National Centers for Coastal Ocean Science (NCCOS) scientists have confirmed the presence of the neurotoxin domoic acid in urine samples from sea lions (*Zalophus californianus*) on San Miguel Island. The investigation is part of a large-scale study of mortality of marine mammals, seabirds, and other marine life occurring along the California coast during April 2007. These mortalities are associated with an extensive bloom of the diatom *Pseudo-nitzschia*, which naturally produces domoic acid and has been responsible for multiple marine animal deaths in California in recent years.

#### *Kelp Forest Monitoring Season Begins in the Sanctuary*

The park's Kelp Forest Monitoring Program recently began its 25<sup>th</sup> year of monitoring with trips on R/V *Shearwater* May 22-25 and June 4-7 to Santa Barbara Island. This multi-agency effort monitors over 70 indicator species at the islands using SCUBA surveys.

Divers use visual transects and quadrats to collect data on fish, invertebrates, and algae. The monitoring program focuses on effects of marine reserves at all five islands in the park and sanctuary, and includes 16 sites inside marine reserves paired with 16 sites outside marine reserves. This unique long-term effort has documented many changes, including some that may be human-induced. The sanctuary is proud to be a partner on this project, and two more Kelp Forest Monitoring multi-day trips are planned on R/V *Shearwater* this year.

#### *Rockfish Recruitment Cruise*

The annual rockfish recruitment cruise by the Fisheries Ecology Division of the NOAA National Marine Fisheries Service (NMFS), Southwest Fisheries Science Center (SWFSC) was recently completed on the NOAA Ship DAVID STARR JORDAN. Dani Lipski, CINMS Research Assistant, participated in the fourth leg of the cruise, which transited through the sanctuary near San Miguel Island. The scientists conducted mid-water trawls for juvenile rockfish and other species and took water measurements and samples. The information is used to assess the spawning success and future recruitment of various rockfish species.

#### **Channel Islands Naturalist Corps (CINC) Volunteer Research and Citizen Science**

##### *State of California Harmful Algal Bloom Study*

CINC volunteers continue to conduct plankton tows on board the R/V *Shearwater* as part of a statewide study on Harmful Algal Blooms. The tows are done in cooperation with Plumes and Blooms research cruises scheduled throughout the year.

##### *Anacapa Island Larval Settlement Study*

Several CINC volunteers have been trained by Michael Moss (Channel Islands National Park Biologist), to assist with a benthic larval settlement study in conjunction with the park and UCSB. The volunteers collect samples two times per month at Anacapa Island.

##### *Spatial Analysis and Assessment of Non-consumptive Uses of California's National Marine Sanctuaries*

From May 12-13, CINC volunteers assisted with private boater surveys in the Channel Islands. This work is part of a multi-year assessment of the spatial distribution of non-consumptive uses in California's national marine sanctuaries. The volunteers assist by processing spatial intercept survey data using Oceanmap (a computer

program created using ArchView geographic information system, or GIS, software), provide survey participants with guided tours of the R/V *Shearwater*, and answer questions about the natural environment and the NMSP. Ten specially trained CINC volunteers are helping with the surveys from May through September, 2007.

##### *Blue and Humpback Whale Photographic Identification*

CINC volunteers are currently participating in photographic identification of blue and humpback whales on select whale watch boats out of Santa Barbara and Ventura harbors. The data is collected in cooperation with Cascadia Research Collective, the primary source for population and distribution trends of blue and humpback whales in California waters. John Calambokidis (Cascadia Research Founder and Research Biologist), provided a workshop for CINC volunteers on June 21, 2007 at Santa Barbara Harbor. The purpose of the workshop was to provide updates on current field research and feedback on CINC photo-id images and data collection.



CINC volunteers help take photos of whales, like this humpback whale spyhopping, during whale watch trips. Photo: Bill Weinerth.

##### *CINC Volunteers Report Local Sea Otter Sightings to the Otter Project and US Geological Survey (USGS)*

CINC volunteers collect routine sightings reports on marine mammals in the Santa Barbara Channel and sanctuary. Occasionally they record California sea otters; however, a recent increase in the number of otter sightings has peaked the interest of biologists with The Otter Project in Marin, California, and the USGS Western Ecological Research Center in Santa Cruz, California. The Otter Project uses CINC otter reports to gain a better understanding of the dynamics of sea otter



range expansion, and the USGS intends to use the reports for a range-wide count.

To read about other CINC activities please see p. 11.

## EDUCATION, VOLUNTEER, & OUTREACH

### Special Events

#### *2007 From Shore To Sea Lecture Series*

The 2007 lecture series continues to feature fascinating Channel Islands topics. On May 8 and 9, Peter Sharpe of the Institute for Wildlife Studies (IWS) gave an overview of the history of bald eagles on the Channel Islands, including the cause of their eventual disappearance from the islands. Using a combination of still photography and video, Dr. Sharpe explained IWS efforts to restore bald eagles to the Channel Islands over the past 28 years, and gave an update on the current status of the island bald eagle population. On June 12 and 13, Torben C. Rick of Southern Methodist University gave a lecture entitled, "Rising Seas and Shrinking Islands: Humans on the Channel Islands After the Ice Age." Rick's talk explored some of the earliest archaeological sites from the Channel Islands, and provided implications for understanding how early mariners lived and thrived in rapidly changing island environments.

The sanctuary, park, and Santa Barbara Maritime Museum jointly sponsor the "From Shore to Sea" lecture series in an effort to further the understanding of science and history of the Channel Islands and surrounding waters. The programs are free and open to the public. The lectures take place at 7:00 p.m. on one Tuesday and Wednesday per month, with Tuesday lectures at the Santa Barbara Maritime Museum's Munger Theatre, and Wednesday lectures at the Channel Islands National Park Robert J. Lagomarsino Visitor Center. For upcoming lectures please refer to the sanctuary calendar on p. 21, or for the complete schedule of 2007 lectures please visit the sanctuary's From Shore to Sea web page:

<http://www.channelislands.noaa.gov/edu/shoretosea.html>

#### *Coastal Marine Biolabs Open House*

Laura Francis attended the open house for Coastal Marine Biolabs, a new integrated and immersive nine-day biosciences program for 11th and 12th grade students based in Ventura, California. Program participants will have the opportunity to explore the natural world through the eyes of a professional scientist. They will explore park and sanctuary kelp forests, and return to the lab to learn how to use sophisticated scientific tools in the realm of modern bioscience. CINMS education staff have provided Coastal Marine Biolabs with an educational packet about the sanctuary, and have scheduled future meetings to determine the best opportunities for collaboration with this exciting new program. For more information, visit [www.coastalmarinebiolabs.org](http://www.coastalmarinebiolabs.org).

#### **CINMS Teacher At Sea**

Wendy Gorton, fourth grade teacher at Hancock Park School in Los Angeles, was selected as the CINMS Teacher at Sea aboard the R/V *Shearwater* for the June 19-21<sup>st</sup> Xantus's murrelet monitoring cruise. Gorton is an enthusiastic and innovative teacher who spends a third of each year teaching her students how living and nonliving parts of ecosystems interact via food webs and adaptations. Her previous experience includes participating in an expedition studying forest caterpillars as an Earthwatch Education Fellow in New Orleans. She is a rugged camper and outdoorswoman, and is working on a Masters degree in Educational Technology. Gorton is planning to create a virtual field trip about the Xantus's murrelet monitoring studies for her students. For more information about the CINMS Teacher at Sea Program, visit <http://channelislands.noaa.gov/edu/tas.html> or contact [julie.bursek@noaa.gov](mailto:julie.bursek@noaa.gov) or [laura.francis@noaa.gov](mailto:laura.francis@noaa.gov).

#### **Workshops**

##### *Channel Mappers Workshop*

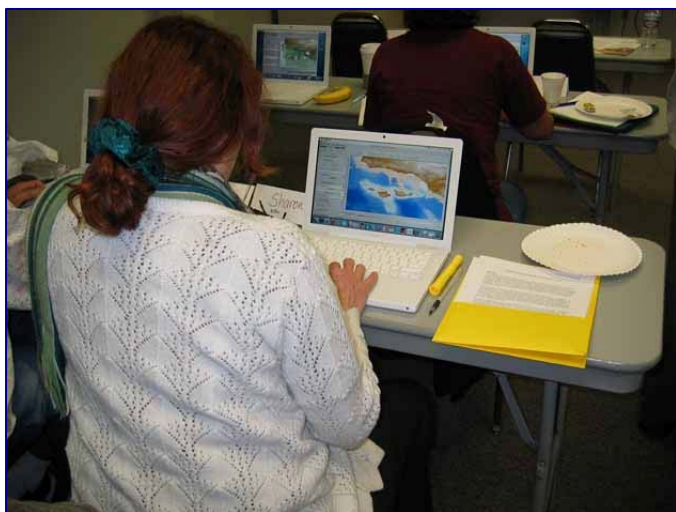
Natalie Senyk, Julie Bursek (Sanctuary Education Coordinator), and Laura Francis helped teach at the June 2-3 Channel Mappers workshop in Camarillo, California, along with representatives of the Ventura County Office of Education, the Center for Image Processing in Education, and the

You can watch the monthly From Shore to Sea Lectures on Ventura's Public Access Channel 15!  
Visit <http://www.capstv.org> for programming information.

UCSB Marine Science Institute. During the workshop, middle and high school teachers learned how to use GIS as a tool that allows students to examine scientific information in ways that are not possible with textbooks, video, interactive multimedia, and Internet Web pages. Participants learned how to integrate inquiry-based learning aided by technology into science, social studies, and history instruction. Lessons included topics such as environmental monitoring, storm water pollution, and long-term monitoring of sandy beach environments. Teachers received resources and support needed to immediately implement GIS, Global Positioning Systems (GPS), and field research with their students, including:

- ready-to-use classroom lessons that make a direct connection to the greater marine environment of the Channel Islands region;
- instruction relevant to the California content standards;
- templates for engaging students in meaningful ocean science experiences relevant to the Santa Barbara Channel; and,
- ten computer licenses for the My World GIS software of the GEODE Initiative at Northwestern University.

Channel Mappers is funded through the NOAA Bay Watershed Education and Training (B-WET) grant program.



A teacher explores the Sanctuary using the My World GIS software program during a Channel Mappers workshop. Photo: Laura Francis. *Communicating Ocean Sciences Workshop*

From June 11-12, Laura Francis and Scott Simon (UCSB Education Coordinator) participated in the Communicating Ocean Sciences training workshop developed by the California Center for Ocean Science Education Excellence (CACOSEE) in Berkeley, California. The workshop provided training on how to teach inquiry-based learning to undergraduate and graduate students, and is widely recognized as a model for promoting ocean science literacy. The Communicating Ocean Science course is offered at over twenty colleges and universities, including UCSB. One course goal is for sanctuary education staff to co-teach the course in the future with a university partner.

### Meetings

#### *Outreach Center for Teaching Ocean Science (OCTOS) Teacher Advisory Committee Meeting*

Laura Francis and Scott Simon hosted the final OCTOS teacher advisory committee meeting of the year on June 5th. Participating teachers from Santa Barbara and Ventura counties have provided input and advice for the development of OCTOS exhibits and programs so that they fit within with their curriculum. OCTOS will be a joint marine education facility of the sanctuary and UCSB Marine Science Institute, which is being designed and built on the UCSB campus.

### **Bay-Watershed Education and Training Program (B-WET)**

The final two sessions for the 2007 Teacher Enrichment Adventure in Watershed Education and Training (TEAWET) program took place on June 22<sup>nd</sup> and 23<sup>rd</sup>. The TEAWET program is a B-WET-funded professional development project for teachers, which focuses on watershed issues in Santa Barbara and Ventura counties. Participating teachers discover new ways to use inquiry and the local environment to teach science - and how to use the watershed, from mountaintops to creeks to beaches, as a context for teaching social studies, art, language skills, math, and other disciplines. On June 22<sup>nd</sup> the teachers spent the full day aboard the R/V *Shearwater* learning about the sanctuary. On the 23<sup>rd</sup> the teachers were at UCSB giving their final presentations on watershed lesson plans that they developed over the course of the training.



## Trainings

### *Docent Training for UCSB Research Experience and Education Facility (UCSB REEF)*

On May 11th, Laura Francis provided a two-hour training seminar about the sanctuary to fifteen undergraduate interns from UCSB who are working as docents at the UCSB REEF. The UCSB REEF is an interactive, educational aquarium managed by the UCSB Marine Science Institute at Campus Point Beach. The UCSB REEF offers docent-led aquarium tours for Santa Barbara and Ventura area schools, and includes a popular "touch tank" program. Docents also participate in science fairs and community outreach events, and provide marine science and environmental education to over 33,000 children and adults each year. The docents participated in a full-day field training seminar to gain first-hand experience, and learn more about the Channel Islands aboard the R/V *Shearwater* on May 16th. For more information, contact [laura.francis@noaa.gov](mailto:laura.francis@noaa.gov).



USCB docents collect plankton as part of an educational trip to the Sanctuary. Photo: Laura Francis.

## Multicultural Education for Resource Issues Threatening Oceans (MERITO)

### *The MERITO Academy Pilot Year Concludes With Success*

CINMS completed a successful pilot MERITO Academy program during the 2006-2007 school year. The pilot MERITO Academy program served 12 teachers, and 11 public school classes, with a total of 330 fifth to eighth grade students (more than 80% of whom are Hispanic, with 25% being English Language Learners, and 82% from underserved communities) from Santa Barbara,

Carpinteria, Ventura and Oxnard cities. The program involved:

- the adaptation and development of the standards-aligned MERITO Academy curriculum;
- two teacher training workshops to guide the educators on implementation of in-class lesson plans;
- an introductory in-class presentation on CINMS and ocean-related threats by Rocío Lozano-Knowlton (Sanctuary Bilingual Education and Outreach Specialist);
- an in-class visit by the UCSB Mobile REEF-Magic Planet program as a collaborating partner;
- sponsorship of and in-the field instruction on three field trips for each class; and,
- student and teacher pre- and post-evaluations.

The first round of field trips related to watershed connections to the ocean, the second focused on coastal resource monitoring using Long-term Monitoring Program and Experiential Training for Students (LiMPETS) protocols, and the final round of trips took place at the Channel Islands. The students also participated in a number of science and conservation oriented activities.



A Community Day Middle School student observes a plankton sample collected during a MERITO Academy educational cruise aboard R/V *Shearwater* (May 2007). Photo: Rocío Lozano-Knowlton.

Within the next three months, Lozano-Knowlton will analyze the students' and teachers' pre- and post-program evaluations, and will work with Scott Simon, and Andrea Moe (Island Packers Education

Coordinator), to further adapt and develop the MERITO Academy curriculum to meet public education needs.

The MERITO Academy is a partnership between the CINMS and Channel Islands Marine Resource Institute in collaboration with a cadre of organizations, and partially sponsored by NOAA B-WET and CINMS. The MERITO Academy's B-WET grant has been renewed for the 2007-2008 school year. The goal of the MERITO Academy is to build sanctuary stewardship, and increase understanding of ocean-related threats among participating students from underserved and culturally diverse communities in Santa Barbara and Ventura counties. For more information contact: [Rocio.Lozano@noaa.gov](mailto:Rocio.Lozano@noaa.gov).

#### *MERITO Academy Field Trips*

MERITO Academy field experiences reinforce the in-class information students receive from their teachers, who participate in MERITO Academy teacher trainings.

On May 21st, 25 fifth grade students from Canalino Elementary implemented sand crab and rocky inter tidal monitoring at Carpinteria State Park Beaches. During this trip Rocío Lozano-Knowlton and Dani Lipski collaborated with Marie Lindsey (California State Parks), and Mr. Tae Woo Kim (Science Matters! Project Director for Santa Barbara and Carpinteria School Districts). According to the California State Park records, this group of students is the first to be instructed on how to implement rocky inter tidal protocols at the Carpinteria LiMPETS site.



Sixth grade students from Oxnard's Driffill Elementary at Inspiration Point, Anacapa Island during a MERITO Academy educational field experience (May 2007). Photo: Rocío Lozano-Knowlton.

On May 29th, 65 fifth grade students (95% Hispanic) from Driffill Elementary of Oxnard, and 15 parent chaperones participated on a trip to Anacapa Island led by Rocío Lozano-Knowlton and Sean Hastings, along with program partners Shannon Newby, and Andrea Moe. During their boat trip, the students observed over 2000 common dolphins, and breaching humpback whales! While at the islands they were able to participate in an interpretative hike, witness the hatching of hundreds of western gulls, and observe and pose questions to park divers during the Channel Islands Live! dive program.

On May 30th, 30 fifth grade students from Harding elementary in Santa Barbara participated in a watershed field experience at Santa Barbara's Bohnett Park, led by Rocío Lozano-Knowlton in collaboration with the Santa Barbara City Creeks Outreach Division, which provided three education specialist staff and native plants. The students were instructed about the benefits of not polluting the creeks, creek connections to the ocean, and native plants. The students also gained hands-on experience with water quality testing, and planting native plants at the banks of Mission Creek.

On June 2nd, the nine top students of Canalino Elementary's fifth grade class had their final MERITO Academy field experience to Santa Cruz Island. Clare Fritzsche (CINC Volunteer Program Assistant) led an interpretative hike during which the students and instructors had close encounters with three Santa Cruz Island Foxes. Rocío Lozano-Knowlton led educational activities, and provided a marine sciences career talk.

#### *Youth at Risk inspired during trip to Santa Cruz aboard R/V Shearwater*

On May 18<sup>th</sup>, 17 eighth grade students (who are primarily Hispanic), considered "youth at risk" by the Santa Barbara School District, embarked on the R/V *Shearwater* to Santa Cruz Island. Rocío Lozano-Knowlton, Shannon Newby, and Claire Fackler organized and led the educational expedition. The 17 students and their eight mentors collected plankton, and identified some species before landing at the Island. Once on shore, the whole group participated in a series of hands-on educational activities, and an interpretative hike. The experience ended with a motivating overview of opportunities and experiences in marine science careers by Fackler and Lozano-Knowlton. Prior to the end of the trip, one student expressed how grateful she

was for the opportunity to experience: her first boat trip, first step on an island, and a glimpse into careers for Hispanic females in marine sciences.

### **Channel Islands Argonauts (Argonauts) Program: Highlights from the 2006-2007 School Year**

The Argonaut Program is part of the B-WET sponsored Channel Islands Live! Program, which is a partnership of CINMS, CINP, and the Ventura County Office of Education. For more information contact [Rocio.Lozano@noaa.gov](mailto:Rocio.Lozano@noaa.gov).

#### *Argonauts and Their Families Help Restore Ormond Beach*

On April 28th, 14 of the fourth to eighth grade student Argonauts (plus 30 family members and peers), participated in a beach clean-up, and installed snowy plover and least tern protective signs with The Nature Conservancy and CINMS staff at Ormond Beach. The group was able to fill up a dumpster, and place signs along a mile-and-a-half of protective fence. Ormond Beach is a "biological hot spot" that was once a 1,000-acre system of coastal dunes, lagoons and salt and freshwater marshes, but only a quarter of this rich habitat exists today. With an estimated 95 percent of southern California's coastline already lost to development, scientists believe Ormond Beach represents one of the state's best coastal wetland restoration opportunities. Since 2004, The Nature Conservancy purchased 277 acres at Ormond Beach, with the goal of restoring it. The Argonauts' small conservation effort was special not only because the students actively contributed to ocean and coastal protection, but also because they involved their families, who mainly reside in nearby areas but had never been to or heard of the Ormond Beach wetlands.

#### *Channel Islands Argonauts Experience Goes Live!*

On June 7<sup>th</sup>, 19 students culminated their experiences as Argonauts by taking part in the live broadcasting of the Channel Islands Live! dive program. From the landing dock the Argonauts were able to pose questions to the scientific divers during their underwater immersion at Anacapa Island's Landing Cove, while over 90 students from Ventura's Sheridan Way School were observing the live broadcast at the CINP auditorium. During the trip, the Argonauts also participated in an interpretative hike led by Clare Fritzsche, and were able to observe hundreds of western gull chicks, some hatching, along

the hiking trail. The Argonauts also participated in a number of environmental services throughout the year.



Channel Islands Argonauts observe divers Dave Kushner (CINP) and Andrea Moe (Island Packers) gear up for the Channel Island Live! Dive program, which is up-linked from Anacapa Island's Landing Cove to the CINP Auditorium in Ventura (June 7, 2007). Photo credit: Rocío Lozano-Knowlton.

### **Channel Islands Naturalist Corps (CINC) Volunteer Program**

#### *May and June CINC Wildlife Sightings*

During the late spring and early summer the Santa Barbara Channel and sanctuary are bustling with wildlife activity. CINC volunteers have recorded dozens of humpback whales over the past month. There have also been reports of mega pods of common dolphins, Pacific white-sided dolphins, Dall's porpoise, Risso's dolphins, bottlenose dolphins, minke whales, and sea otters. The first blue whale of the season was spotted mid-Channel on June 15<sup>th</sup>, going solo on its northward migration.



On June 4<sup>th</sup> CINC volunteers saw Orcas feeding near Santa Cruz Island. On June 3<sup>rd</sup> and 10<sup>th</sup> CINC volunteers spotted a basking shark in the Channel, and reported it to the Pelagic Shark Research Foundation for potential tagging. Humboldt Squid have appeared in the Channel, and are keeping the local sport fishing operators busy with recreational anglers. Western Gull chicks are hatching on the islands and fledgling California brown pelicans are starting to fly. To learn more about marine mammal sightings collected by CINC volunteers, and to record your own marine mammal sightings, please visit the sanctuary's online Marine Mammal Sightings Database: <http://www.cisanctuary.org/mammals/>

*May and June Whale Watch Vessel Excursions*  
Santa Barbara's *Condor Express* and Santa Barbara Sailing Center's *Double Dolphin* were the whale watch operators offering trips in May and June. The Condor ran whale watching trips once daily. The Double Dolphin offered a varied schedule with 24 trips in May, and eight in June.

CINC volunteers presented interpretation on 43 whale watching trips in May and 38 in June. During the summer season additional operators will be scheduling trips in July, and blue whales are expected to start showing up in the Channel.

*May and June Island Programs*  
CINC island hike naturalists participated in six Island Packers trips to Anacapa Island from Ventura Harbor in May, along with seven trips from Channel Islands Harbor in May and seven in June. In addition, they participated in 13 trips to Scorpion Anchorage and one trip to Prisoners Anchorage, both on Santa Cruz Island, in May. There were two naturalist-led trips to Santa Rosa Island in May, and two in June.

CINC volunteers will provide vital support to the Channel Islands Live! underwater video uplink program with topside interpretation and diver support on Tuesdays, Wednesdays, and Thursdays throughout the summer season. The summer program began on May 29, and is broadcast from Landing Cove, Anacapa Island, educating the public about the kelp forest, ecology, and marine reserves. Thousands of island visitors and school children experienced the program during May and June.

### *Island Hike Training*

Eight more CINC volunteer naturalists have been trained and certified to lead hikes at the Channel Islands, for a total of 43. The remaining naturalists who attended this year's training continue to "shadow" seasoned volunteers on island hikes as part of the certification process. The sanctuary and park continue to increase CINC volunteers trained to lead island hikes to improve coverage during the busy spring and summer season with Island Packers and Truth Aquatics.

### *Monthly In-Service Meetings*

On April 17, 2007 Dr. Charles Rennie (Santa Barbara Museum of Natural History Vertebrate Zoology Curator Emeritus) provided an overview of blue and humpback whale biology to prepare CINC volunteers for the spring and summer whale watching season.

On May 15, 2007 Natalie Senyk gave a presentation on CINC volunteers' role in sanctuary research and monitoring. Senyk also discussed GIS and marine mammal work within island waters.

On June 19, 2007 Dr. Satie Airame (UCSB) delivered a presentation entitled, "Communicating the Science of Marine Reserves." Airame provided an overview of the science of marine reserves, as well as a brief description of the monitoring that is going on at our islands, and provided an activity to train CINC volunteers how to communicate this topic to the public.

### **Public Outreach in May and June**

#### *Spring Into Science Conference for Local Science Educators*

On April 28<sup>th</sup>, the sanctuary and park participated in the Gold Coast Science Network's "Spring into Science" conference at Oxnard College. The Network is a local chapter of teachers, scientists, businesses, and community members dedicated to improving the quality of science education in Ventura and Santa Barbara counties. A CINC volunteer interpreter was on hand to answer questions at a joint sanctuary and park exhibit, and sanctuary partners from the park and Ventura County Office of Education provided a presentation entitled, "Channel Islands Live! – No Scuba Gear Required."

*(Continued on p. 14.)*

## SPOTLIGHT ON VOLUNTEERS

### Channel Islands Naturalist Corps Volunteer Field Report, June, 2007

I recently had the great fortune of joining Darrell Whitworth (a seabird biologist with the California Institute of Environmental Studies) on Anacapa Island for a two-day Xantus's murrelet research expedition. Xantus's murrelets are a threatened species of seabird that breeds on the Channel Islands. It is estimated that half of the bird's worldwide population comes to the Northern Channel Islands for breeding, while the remaining birds breed on islands in Baja California, Mexico. Darrell's mission is to measure the health and population of these murrelets.

The life of a Xantus's murrelet is difficult. During the day they seek food, generally about 100 miles from the island they live on. Then, at night they return to the island for shelter and social interaction with other Xantus's. They are very location faithful, always returning to their birthplace each night. Birds may live to an age of 20 years, and they are likely to have the same mating partner year-after-year.

During the breeding season the male and female take turns caring for the eggs, at three-day intervals. Xantus's murrelets lay two eggs per clutch, one clutch per year. The proud parents put one egg under each wing during the incubation period. Xantus's murrelets usually nest in small holes within sea caves and on sea cliffs.

It is estimated that there are 5,000 to 30,000 Xantus's murrelets in existence today (no one knows for sure). Because it is so difficult to see Xantus's murrelets there is no known estimate of historical populations, and very little is known about their natural history. [Editor's note: in 2004, based on a petition from the Pacific Seabird Group, and a recommendation from the California Department of Fish and Game, the California Fish and Game Commission listed the Xantus's murrelet as a threatened species under the California Endangered Species Act.] Several factors have led to the decline in Xantus's murrelets, with the primary factors believed to be the introduction of black rats to the islands. Rats eat murrelet eggs and murrelet babies.

Darrell's goal is to monitor the Xantus's murrelet population worldwide, and to measure how the black rat eradication from Anacapa Island in 2003 has affected the population. Darrell's team uses two primary fieldwork techniques: evaluating nests during the day, and transect-line bird counts at night. In the past five years Darrell has banded nearly 1,400 murrelets.

Darrell's early results have indicated a slight increase in Xantus's murrelet population size. However, on this trip we did not see any active nests, but we did see three empty nests. Darrell believes that the Xantus's murrelet is nesting later than usual this year. Our nighttime survey efforts were hampered by foggy conditions, thus making bird counting very difficult.

For more information on these beautiful birds visit: [http://en.wikipedia.org/wiki/Xantus's\\_Murrelet](http://en.wikipedia.org/wiki/Xantus's_Murrelet).  
You can also check out the 2005 summary of Darrell's research here:  
[http://www.iucn.org/places/medoffice/invasive\\_species/case\\_studies/anacapa\\_xa\\_mu\\_05.pdf](http://www.iucn.org/places/medoffice/invasive_species/case_studies/anacapa_xa_mu_05.pdf).

- **Geoffrey W. Grow**  
Channel Islands Naturalist Corps Volunteer (2005)  
and Island Trained Naturalist

Note from the Sanctuary Volunteer and Outreach Coordinator: Channel Islands Naturalist Corps volunteers who have been active for at least one year are provided with the opportunity to participate in research trips such as this Xantus's murrelet trip. This experience allows volunteers to support research scientists and sanctuary research efforts, and to gain first-hand experience with resource protection in the sanctuary.

*Santa Barbara Symphony's Family Concert Series:  
"Island of the Blue Dolphins"*

The sanctuary hosted an outreach exhibit on May 6<sup>th</sup> at the Santa Barbara Symphony's "Island of the Blue Dolphins" concert, held at the Lobero Theater in Santa Barbara. Peter Madlem's "Island of the Blue Dolphins" composition takes its story from the Newberry Award-winning novel by Scott O'Dell, which is based on the true tale of a Native American girl who was left behind on one of the outer Channel Islands during the mission period. This unique outreach opportunity was organized by the Santa Barbara Museum Educator's Roundtable, and the Santa Barbara Symphony's Family Concert Series.

*Channel Islands Harbor Safe Boating Expo*

On May 12<sup>th</sup>, the sanctuary joined the National Weather Service and the park to promote safe boating practices at the Channel Islands, and increase boater awareness about resource protection. The event was held at the U.S. Coast Guard Station in Oxnard. Over 2,000 members of the public attended the event, which had agency displays, safety demonstrations, air and sea rescues with a U.S. Coast Guard Helicopter, and vessel tours. This event was coordinated in conjunction with the 2007 Safe Boating Campaign.

*Santa Barbara Botanic Garden's BioBlitz*

On May 12<sup>th</sup>, the Santa Barbara Botanic Garden sponsored the first ever BioBlitz Santa Barbara Conservation Counts event. The sanctuary and park co-sponsored a CINC volunteer-staffed booth at the event. Visitors saw scientists, naturalists, and citizen-scientists in action as they discovered, documented, and preserved their findings. The goal of the BioBlitz was to engage the public in understanding and appreciating the incredible biodiversity that exists in our own backyard, and to emphasize the importance of conservation measures to preserve this diversity.

*Grand Opening of Thirteenth California Welcome Center*

On May 16<sup>th</sup>, Shauna Bingham (Sanctuary Volunteer Outreach Coordinator) and Julie Bursek represented the sanctuary at the grand opening gala of the newest California Welcome Center in Oxnard. CINC volunteers also participated in the grand opening to highlight the CINC program, and eco-tourism opportunities in the sanctuary and park. The 13 welcome centers, all of which are located along major California highways, are

currently projected to reach over 1.1 million California visitors in 2007. Over 200 people attended the grand opening, including local City officials from Oxnard and Ventura, and staff from State Assembly Member Pedro Nava's office. This Welcome Center is expected to draw over ten thousand walk-in visitors on a monthly basis. Future plans for the Oxnard Welcome Center location include installation of a Sanctuary Interactive Kiosk. The Channel Islands Harbor Department is an important sanctuary partner in the Welcome Center, and other key regional projects, including the new Channel Islands Harbor Boating and Instruction Safety Center.

On June 6<sup>th</sup> Shauna Bingham gave a presentation about CINMS and all of the west coast national marine sanctuaries to the regional directors of California's Welcome Centers.

*Local School Science Fairs*

On May 24<sup>th</sup>, the sanctuary attended the Science Night and Fair at Isla Vista's Goleta Union School, a K-6 school with a 68% Hispanic student body. CINC volunteers provided hands-on demonstrations to over 200 students, families, and teachers about sanctuary and park resources. On May 31<sup>st</sup>, the sanctuary attended Science Night at the Harding School, a K-6 school in Santa Barbara with a 95% Hispanic student body. The sanctuary distributed the Spanish language version of the "Protecting Your Channel Islands" brochure at both events.

*"Songs in the Key of Sea" CD/ DVD Release Party  
Benefits the National Marine Sanctuary Foundation*

On May 17<sup>th</sup>, local Jazz Vocalist Kimberly Ford had a "Songs in the Key of Sea" CD release party at the Santa Barbara Maritime Museum. The event also included the premier of the companion DVD "Water Mark," a music video by Emmy Award-winning underwater filmmaker Mike deGruy. Chris Mobley (Sanctuary Superintendent) opened the event festivities. Sanctuary staff and Dino Dal bon (CINC volunteer) educated over 200 people about the sanctuary during the event. During the event Dal bon interacted with a colleague from the Pacific National Bancorp, after which the organization decided to feature Dal bon's sanctuary and park volunteer efforts in their regional newsletter. Proceeds from CD/DVD sales benefited the National Marine Sanctuary Foundation.



#### *24th Annual Santa Barbara Children's Festival*

On May 19<sup>th</sup>, the sanctuary, in partnership with the park and the Santa Barbara Educator's Roundtable, attended the 24<sup>th</sup> Annual Santa Barbara Children's Festival. CINC volunteers provided hands-on learning opportunities about the sanctuary and park for an estimated 2,000 participants.

#### *Santa Barbara Zoo's "Wonders of Water" Event*

On June 2<sup>nd</sup>, the sanctuary attended the Santa Barbara Zoo's "Wonders of Water" Event. This public education event is part of a national effort with the Association of Zoos that is focused on educating the public about the amazing world of water, including information on the ocean, local creeks, and the animals that reside in water, as well conservation. "Wonders of Water" included educational exhibits, zookeeper talks, theatrical performances, a walk-through "ocean," ocean crafts, storytelling, and more. Approximately 2,000 people attended the "Wonders of Water" event.

#### *Sanctuary Partners With NOAA Fisheries at SCUBA Show 2007, June 2-3, 2007*

From June 2<sup>nd</sup>-3<sup>rd</sup>, CINC volunteer Bob Rydgig (an avid Channel Islands diver for the past 40 years), distributed educational information about the sanctuary and marine reserves at the The SCUBA Show 2007. The SCUBA Show, held at the Long Beach Convention Center, is now the largest consumer dive expo in the western hemisphere. The SCUBA Show includes exhibits, a film festival and photo contest, and over 30 seminars. NOAA Fisheries Office for Law Enforcement worked with the sanctuary to partner on coverage at the NOAA booth. An average of over 10,000 people have attended The SCUBA Show for the past 15 years.

#### *MERITO and CINC Reach 1,200 Underserved Students at the H2OScience Exploratorium in Oxnard*

On May 24<sup>th</sup>, Rocío Lozano-Knowlton and three CINC volunteers informed 1,200 third grade students about CINMS marine resources, and how they can contribute to ocean protection by taking simple actions at home. The students visited the CINMS booth in separate groups of 15-25 at a time. After introducing students to CINMS and its resources, Lozano-Knowlton and the CINC volunteers used a watershed model to demonstrate urban runoff and show the students how they can help protect the ocean through corrective actions. The City of Oxnard organizes and sponsors the H2OScience Exploratorium to educate Oxnard School District third

grade students (who are primarily Hispanic) about water conservation, water sciences, and water resource protection. For more information contact:

[Rocio.Lozano@noaa.gov](mailto:Rocio.Lozano@noaa.gov)

### **Upcoming Public Outreach Events**

#### *Month of July-Great Annual Fish Count*

July marks the 15th Great Annual Fish Count, a fish survey project conducted by divers worldwide. Two northern Channel Islands boats have generously offered fish count participants discounts for trips in July. The Peace ([www.peacediveboat.com](http://www.peacediveboat.com)) will offer \$10.00 off mid-week/ open boats in July, and Truth Aquatics ([www.truthaquatics.com](http://www.truthaquatics.com)) will give 20% off on open boats in July. Make reservations directly with the boat and show your REEF membership card ([www.reef.org/join.htm](http://www.reef.org/join.htm)) and surveys on the day of the trip. Happy fish counting!

The surveys are designed so that anybody familiar with fish and invertebrates in the Channel Islands can do a survey quite easily, and help support monitoring of these species in the sanctuary. The Paradise Dive Club will have some members on the Truth on Sunday July 29<sup>th</sup>, and there may also be a second trip earlier in the month (likely July 8<sup>th</sup>), depending on schedules. For more information send an e-mail to [gafc07@yahoo.com](mailto:gafc07@yahoo.com).

#### *Ventura County Fair, Seaside Park, Ventura*

The sanctuary, park, Santa Monica Mountains National Recreation Area, and regional State Parks are planning a joint booth as "partners in preservation" at the 2007 Ventura County Fair (August 1-12). The theme this year will have a focus on the "old fashioned" and several exhibits related to the ranching era of the Channel Islands are being planned. Robert Schwemmer, (Sanctuary Maritime Heritage Coordinator) is developing an exhibit on the "Shipwrecks that Built San Miguel Island."

## **MARITIME HERITAGE PROGRAM**

### **Education and Outreach**

On June 19<sup>th</sup>, Robert Schwemmer provided a lecture at the Santa Barbara Maritime Museum on: Channel Islands shipwrecks, recent expeditions to the (*see p. 17*)

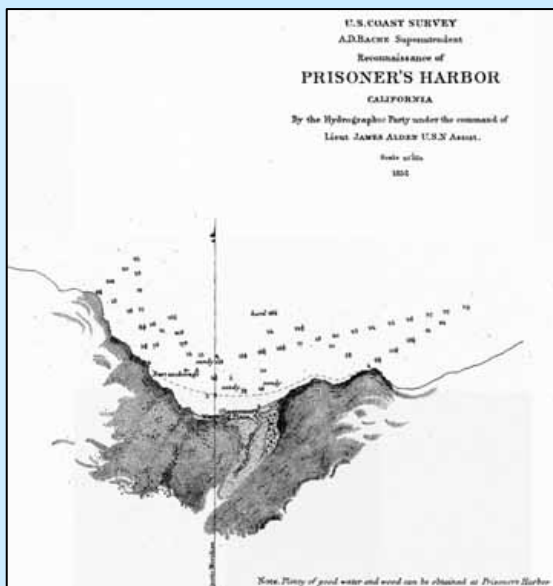
### ***CHANNEL ISLANDS: STORIES FROM THE PAST***

An article from San Francisco's *Daily Evening Bulletin* dated December 1, 1869 and titled "Mackerel on the California Coast – Opening for a new Industry" is provided in part below.

--Few persons are aware of the fact that mackerel of a good quality can be caught, in very large quantities, in the waters surrounding the islands of the Santa Barbara channel. There are four of these islands. They are named San Miguel, Santa Rosa, Santa Cruz and Anacapa. Of these, Santa Cruz and Santa Rosa are the largest, containing about 5,000 acres of land each. They are covered by Spanish grants. Anacapa and San Miguel are owned by the Government. They have never been surveyed, and are open to settlement. Each of these four islands is about 20 miles from the mainland. The thirty-fourth parallel of latitude passes through all of them. The island of Santa Cruz is only 18 miles from the town of Santa Barbara; Anacapa is 30; Santa Rosa is 40, and San Miguel is 60 miles from that town.

The mackerel can be caught and are good at all seasons, but they are most abundant in the months of June, July, August and September. In 1868 Capt. Mathew Parlong caught 100 barrels while lying in Prisoner's harbor, in the island of Santa Cruz. In the same year a number of San Francisco fisherman filled a schooner with the fish, but they threw them into salt without cleaning them, and of course they were in bad order when taken out here. A Mr. Fry has been catching and barreling them in small quantities this year, supplying the local demand of the southern coast. The fish are sure to be excellent, making what is known to the trade as No. 2 mackerel. No. 1 mackerel are larger in size, but no better in quality than No. 2.

The fish and salt are found almost together. All requisite land for curing establishments can be had on either upon Anacapa or San Miguel. It would therefore seem that there is a direct and profitable opening for a home mackerel curing establishment on the southern coast. The fish are free, and the salt and the land are free. The matter is well worthy the attention of those interested in the sale of cured fish. There is no reason why we should pay for curing the mackerel, we use all the way round the Horn, if they are inviting as to catch and use them at our own door.--



(Left) An 1852 survey of Prisoner's Harbor shows one of the late 1800's hot spots for mackerel highlighted in the article. (Bottom) Pacific mackerel range worldwide in temperate seas, and in the eastern Pacific from Chile to the Gulf of Alaska (source: <http://www.dfg.ca.gov/MRD/mspcont1.html>).



USS *Macon* at the Monterey Bay National Marine Sanctuary, and the shipwrecks USS *Saginaw* and *Dunnottar Castle* located in the Papahānaumokuākea Marine National Monument. Each of these wrecks has historic linkages to the Channel Islands. The lecture was presented to Museum docents and staff, and included interpretative training for the sanctuary's shipwreck exhibits.

For more information on these shipwrecks please visit the following web sites.

- Channel Islands Maritime Heritage  
<http://channelislands.noaa.gov/cr/main.html>
- *Dunnottar Castle*  
<http://www.noaanews.noaa.gov/stories2006/s2713.htm>
- R/V *Hi'ialakai* Expedition 2006  
[http://sanctuaries.noaa.gov/missions/2006nwhi/log\\_071606a.html](http://sanctuaries.noaa.gov/missions/2006nwhi/log_071606a.html)

From May 19<sup>th</sup> – 24<sup>th</sup>, Schwemmer attended the Nautical Archaeology Society (NAS) training course for underwater survey techniques. This course was hosted by NOAA's Maritime Heritage Program. NMSP trainee instructors taught the NAS Level I training class as part of their NAS Instructor Certification. Five NMSP staff, three Michigan State troopers, and one archaeologist from Mote Marine Lab (Florida) participated in the course. The newly certified Maritime Heritage Program NAS instructors will teach the NAS training curriculum to NMSP staff and partners across the National Marine Sanctuary System, as well as to all volunteer divers providing archaeological survey support to the NMSP.



Thunder Bay National Marine Sanctuary, with headquarters in Alpena, Michigan (picture above), hosted the Nautical Archaeology Society training in May. Photo: Robert Schwemmer.

For more information on the NAS visit:  
<http://www.nasportsmouth.org.uk/>.

The California Coastal Commission publication Beaches and Parks From Monterey To Ventura (<http://www.ucpress.edu/books/pages/10749.html>), and the Western National Parks Association series' recent publication Santa Monica Mountains National Recreation Area feature several of Robert Schwemmer's images for the Channel Islands region. A new outreach poster featuring one of Schwemmer's images of divers surveying a whaling shipwreck in the



Pacific white sided dolphins. Photo: Robert Schwemmer. Papahānaumokuākea Marine National Monument provides an interpretive history of whaling shipwrecks and is titled A Whale of A Journey.

### Regional Maritime Heritage Program

The Santa Barbara Maritime Museum's journal Maritime Currents published an article on the USS *Macon* 2006 expedition that Schwemmer authored. On June 9<sup>th</sup>, Schwemmer presented a lecture on the *Macon* expedition at the Los Angeles Maritime Museum. The U.S. Navy's airship USS *Macon* was lost off the Big Sur coastline in 1935, and the archaeological remains are within the boundaries of the Monterey Bay National Marine Sanctuary. For more information on the USS *Macon* Expedition 2006 please visit:  
<http://sanctuaries.noaa.gov/missions/2006macon/welcome.html>.

Schwemmer completed the content for the *In Search Of The Lost Whaling Fleet* expedition web site associated



with the 1871 whaling fleet disaster that occurred in the Arctic region of Alaska. In August 1871, a fleet of 33 whaling ships arrived to hunt bowhead whales in Alaska's remote Chukchi Sea. The pack ice being close to shore that year left little room for the vessels. The whaling captains counted on a wind shift from the east to drive the pack out to sea. Instead, the moving ice trapped the fleet against the coast, and 1,219 men, women, and children made their way to the southwest in open boats in search of rescue. The archaeological remains of this fleet are windows into this tragic event. From July 14-22, Schwemmer will travel to Barrow, Alaska to conduct interviews in the region and search for remnants of the lost fleet onshore. During this same period researchers will conduct an offshore remote sensing survey, searching for the submerged shipwrecks. The study supports a joint project of the NMSP



Humpback whales lunge feeding in the Monterey Bay National Marine Sanctuary. Photo: Robert Schwemmer.



"Abandoning the Barks" illustration from Harpers Weekly. Director's Office, NMSP West Coast and Pacific Islands regions, in collaboration with the NMSP's Maritime Heritage Program.

From May 16-18, Schwemmer traveled to Monterey to work with Monterey Bay National Marine Sanctuary staff on their site's condition report. During his visit he joined the Monterey Bay National Marine Sanctuary's Advisory Council on a whale watching trip aboard that sanctuary's R/V *Fulmar*. The group witnessed humpback whales lunge feeding in the sanctuary.

**WEB SITE** (<http://channelislands.noaa.gov>)

### Recent Updates

Visit the web pages listed below to see recently updated sections of the CINMS web site.

The 2006 State of the Sanctuaries report is available on the CINMS home page, linked on the scrolling ticker at: <http://channelislands.noaa.gov/>.

Check out the Marine Reserves web section for the Final Environmental Impact Statement & Final Rule for the establishment of Marine Reserves and Marine Conservation Areas:

<http://channelislands.noaa.gov/marineres/main.html> and <http://channelislands.noaa.gov/marineres/supplemental.html>.

The CINMS Shipwreck Database is now offering updated coordinates for the CINMS datatip exercise at <http://channelislands.noaa.gov/shipwreck/cinms1.html>, along with a new nautical chart located at [http://channelislands.noaa.gov/edu/edu\\_act.html](http://channelislands.noaa.gov/edu/edu_act.html).

The Teacher at Sea web site has been updated to offer a Teachers Journals from the 2006 field season: <http://channelislands.noaa.gov/edu/tas.html>.

The Research section is now hosting information about the remotely operated vehicle (ROV) deep water monitoring project with Marine Applied Research & Exploration:

[http://channelislands.noaa.gov/res/cinms\\_res.html](http://channelislands.noaa.gov/res/cinms_res.html).

Don't forget to check out our calendar of events to find out what's happening locally:

<http://channelislands.noaa.gov/focus/calendar.html>.

### Upcoming Modifications

On deck for web additions is a "What's New – Great Annual Fish Count 2007 / REEF" informational page, which will link to REEF's "Special Projects - Channel Islands National Marine Sanctuary" page.

*Please take a few moments to peruse the site. Your feedback is greatly appreciated. Comments and suggestions can be sent to [amy.cale@noaa.gov](mailto:amy.cale@noaa.gov).*



## NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND NATIONAL MARINE SANCTUARY PROGRAM (NMSP) NEWS



### Intergovernmental Exchange to Chile

Laura Francis has been selected to represent the NMSP on a three-month intergovernmental exchange program in Valparaíso, Chile with the Partners of the Americas program (<http://www.partners.net/>). Francos will travel to Chile in mid-August, and will stay until the end of November. While there, she will work on several MPA projects including: assistance with developing management plans, developing education and outreach programs, planning for a MPA session for the second Latin American Parks Congress, planning for a South American MPA management capacity training program, and helping to develop partnerships between Chilean and U.S. MPAs.

### New Report Addresses Data Collection Standards

The NMSP has released a new report to help scientists better integrate monitoring data collected while at sea. The report, entitled "Standardizing At-Sea Monitoring Programs for Marine Birds, Mammals, Other Organisms, Debris, and Vessels, Including Recommendations for West Coast National Marine Sanctuaries," provides guidance to researchers conducting long-term monitoring of seabird and marine mammal populations, taking into account variable funding levels, logistics, vessel platforms and management issues. The report is now available on the Gulf of the Farallones National Marine Sanctuary web site at

<http://farallones.noaa.gov/research/pelagichabitat.html>.

### President Seeks to Increase Protection of the Papahānaumokuākea Marine National Monument

President Bush has instructed the U.S. delegation to the International Maritime Organization (IMO) to submit a proposal for international measures that would enhance protection of the Papahānaumokuākea Marine National Monument. He proposed that the IMO designate the entire area as a Particularly Sensitive Sea Area, similar to areas such as the Florida Keys, the Great Barrier Reef, and the Galapagos Archipelago, which will alert mariners to exercise caution in the ecologically important, sensitive, and hazardous area they are entering.

### National Ocean Service (NOS) Leads MPA Training in China

NOS recently led a workshop in Xiamen, China, to provide training for 60 Chinese professionals on MPA management and capacity-building. The international training team included representatives from: NOS's International Program Office, Office of Coastal and Ocean Resource Management, and National Marine Sanctuary Program; along with NOAA Fisheries; NOAA Coastal Services Center-Pacific Science Center; The Economic and Social Research Institute; The Nature Conservancy; Johns Hopkins University; the Pakistan Wetlands Programme; and the Australian government. Workshop topics included watershed management, land-use impacts, site-level management, plan development, performance indicators and evaluation criteria, MPA network development, and GIS in decision support and data analysis. The Marine Biodiversity and Ecosystem Management Training and Education Center, recently

established by the Chinese government, the United Nations Development Program, and NOAA, hosted the workshop.

### **NOAA Keeps Multiple Partners Informed about California's Wayward Whales**

Sharing information and keeping the public informed can be a challenge during a multi-agency response. To effectively meet this challenge, NOAA Fisheries requested assistance from the NOAA Office of Response and Restoration's (OR&R) Emergency Response Division for the recent multi-agency rescue operation of two humpback whales in the Sacramento River. In addition to NOAA Fisheries and ERD, the Marine Mammal Center, U.S. Coast Guard, California Department of Fish and Game, and the California Governor's Office of Emergency Services participated in the operation. NOAA's California Scientific Support Coordinator offered the use of their ResponseLINK system, which enabled information-sharing between the various agencies. OR&R made use of a new feature in ResponseLINK to create a hotline for the response; it allows administrators to grant "incident only" permissions to nongovernmental personnel and organizations with a need to view specific information. This made it possible for the Marine Mammal Center personnel to post and view critical information related to the rescue, while protecting the integrity of unrelated ResponseLink hotlines. NMFS contributed greatly to IncidentNews, <http://www.incidentnews.gov>, an OR&R online newsletter, to keep the public informed. The multiple partners' information needs were well served through this One-NOAA effort.

### **Dr. Robert Ballard's Immersion Presents Plans for Monterey Bay Expedition in March 2008**

Staff from the NMSP and the Monterey Bay National Marine Sanctuary are helping to plan the March 2008 expedition to Monterey Bay aboard the R/V *Fulmar*. It is likely that the other three California national marine sanctuaries will be linked to the expedition through a "connected by the currents" theme. Through a letter of agreement with Immersion Presents, the adventure series and curriculum extensions would be made available to local communities for use after the live expedition broadcast. For more information contact: [claire.fackler@noaa.gov](mailto:claire.fackler@noaa.gov).

### **Oceans for Life Virtual Teachers Workshop**

Claire Fackler represented the NMSP in the Earth Day Virtual Teacher workshop titled "Oceans for Life." The National Geographic Society and the College of Exploration hosted the virtual workshop. Dr. Carl Safina (of the Blue Ocean Institute) provided the keynote presentation, which focused on fisheries and some scientists' prediction of a crash in all ocean life by 2050. Greg Marshall (of National Geographic's Critter Cam program) discussed what we are doing to safeguard the future of our oceans, and Dr. Michael Libbee (Director of the Michigan Geographic Alliance) demonstrated how to make these topics an important part of classroom curricula, with new classroom applications and extensions. Fackler presented NMSP educational resources and professional development opportunities to the 1100+ participants from 43 different countries. For more information, visit

<http://www.coexploration.org/ngs/EarthDay/>.

### **Bringing Oceans into Classrooms**

The NMSP, in collaboration with the National Geographic Society, has launched a new series of multimedia marine education lesson plans highlighting cutting-edge research, maritime heritage, cultural resources, and environmental issues in national marine sanctuaries. Designed for K-12 teachers and marine educators, the 12 Oceans for Life lesson plans and complementary short videos enable students to explore the history, biology, and ecology of the National Marine Sanctuary System. For more information, visit <http://sanctuaries.noaa.gov/education>.

### **NOAA Movie of the Week Premieres on YouTube**

The NOS Ocean Media Center proudly presents a YouTube movie of the week. Movies available so far include: an expedition to the deep trenches of the Monterey Bay National Marine Sanctuary; a look at what it's like to be a scientist on board the NOAA ship *McArthur* during a sanctuary quest expedition; the story of Henry Wood Elliott, Defender of the Fur Seal; and the hunt for the USS *Alligator*, the Navy's first submarine, which sunk off Cape Hatteras in 1863. Check these and other NOAA movies out at

<http://www.youtube.com/user/NOAAOceanMediaCenter>



## THREE-MONTH CHANNEL ISLANDS NATIONAL MARINE SANCTUARY CALENDAR

JULY	
Jul. 10, 11	<p><i>From Shore to Sea Lecture Series:</i>                      Christy Pattengill-Semmens, Reef Environmental Education Foundation (REEF)  <i>Citizen Monitoring in the Marine Reserve Network</i>                      Tuesday: 7:00 pm Chase Palm Park Center, 236 E. Cabrillo Blvd., Santa Barbara                      Wednesday: 7:00 pm Channel Islands National Park Visitor Center (1901 Spinnaker Drive in Ventura)</p>
Jul. 20	<p><i>Sanctuary Advisory Council Meeting</i>                      Channel Islands National Park Visitor Center (1901 Spinnaker Drive in Ventura)                      An agenda, directions and more information will be posted at: <a href="http://www.channelislands.noaa.gov/sac/announcement.html">www.channelislands.noaa.gov/sac/announcement.html</a></p>
All month	<p><i>15th Great Annual Fish Count</i>                      The Peace (<a href="http://www.peacediveboat.com">www.peacediveboat.com</a>) will offer \$10.00 off mid-week/ open boats in July                      Truth Aquatics (<a href="http://www.truthaquatics.com">www.truthaquatics.com</a>) will give 20% off on open boats in July.                      For more information: <a href="http://www.reef.org/join.htm">www.reef.org/join.htm</a></p>
July (late)	<p><i>Marine reserves and conservation area final rule anticipated to take effect.</i>                      For more information: <a href="http://www.channelislands.noaa.gov/marineres/main.html">http://www.channelislands.noaa.gov/marineres/main.html</a></p>
AUGUST	
Aug. 1-12	<p><i>Ventura County Fair</i>                      Seaside Park, Ventura                      For more information: <a href="http://www.venturacountyfair.org/">http://www.venturacountyfair.org/</a></p>
Aug. 14, 15	<p><i>From Shore to Sea Lecture Series:</i>                      Satie Airame, University of California, Santa Barbara  <i>PISCO and Marine Reserve Monitoring</i>                      Tuesday: 7:00 pm Chase Palm Park Center, 236 E. Cabrillo Blvd., Santa Barbara                      Wednesday: 7:00 pm Channel Islands National Park Visitor Center (1901 Spinnaker Drive in Ventura)</p>
SEPTEMBER	
Sep. 11, 12	<p><i>From Shore to Sea Lecture Series:</i>                      Marla Daily, Santa Cruz Island Foundation  <i>Carey Stanton's Santa Cruz Island, 1937-1987</i>                      Tuesday: 7:00 pm Chase Palm Park Center, 236 E. Cabrillo Blvd., Santa Barbara                      Wednesday: 7:00 pm Channel Islands National Park Visitor Center (1901 Spinnaker Drive in Ventura)</p>
Sep. 15	<p><i>21st Annual Coastal Cleanup Day 9:00 a.m. to 12:00 p.m.</i>                      Channel Islands National Marine Sanctuary Sponsored Beaches:                      Santa Barbara: Chase Palm Park Beach      Ventura: Emma Wood State Beach                      For more information: <a href="http://www.coastal.ca.gov/publiced/ccd/ccd.html">http://www.coastal.ca.gov/publiced/ccd/ccd.html</a></p>
Sep. 21	<p><i>Sanctuary Advisory Council Meeting</i>                      Casa Las Palmas (323 E. Cabrillo Blvd. in Santa Barbara)                      An agenda, directions and more information will be posted at: <a href="http://www.channelislands.noaa.gov/sac/announcement.html">www.channelislands.noaa.gov/sac/announcement.html</a></p>
<b>Select July – September Nature Sightings</b>	<p>Blue Whales (late-May through September), Humpback Whales (May through August), Xantus's murrelets (March through July), California Sea Lion (pupping and breeding season: May through July), Pink-Footed Shearwaters and Sooty Shearwaters (May through October).</p> <p>For more nature sightings information visit: <a href="http://channelislands.noaa.gov/seasons/may.html">http://channelislands.noaa.gov/seasons/may.html</a>. You can also record data about your own mammal sightings, as well as learn about past mammal sightings using our marine mammal sightings database: <a href="http://www.cisanctuary.org/mammals/">http://www.cisanctuary.org/mammals/</a>.</p>

## CINMS Staff

### Santa Barbara Harbor Office

Christopher Mobley – *Superintendent*  
Todd Jacobs – *Deputy Superintendent*  
Amy Cale – *Web Developer*  
Laura Francis – *Education Coordinator*  
Sean Hastings – *Resource Protection Coordinator*  
Charles Lara – *Vessel Operator*  
Dani Lipski – *Research Assistant*  
Sarah MacWilliams – *Management Plan Specialist*  
Michael Murray – *Advisory Council and  
Management Plan Coordinator*  
Luman Moody – *Vessel Captain*  
LTJG Kate Peet – *Operations Officer*  
Robert Schwemmer – *Regional Maritime Heritage Coordinator*  
Natalie Senyk – *Scientific Advisor*  
Terrence Shinn – *Vessel Captain*  
Ben Waltenberger – *Physical Scientist*  
Rebecca Young – *Inventory/Database Coordinator*

### Ventura County Field Office

Shauna Bingham – *Volunteer Program and Outreach  
Coordinator*  
Julie Bursek – *Education Coordinator*  
Clare Fritzsche – *CINMS Volunteer Program & Administrative  
Assistant*  
Lorri Herr – *Program Support Specialist*  
Rocío Lozano de Knowlton – *Bilingual Education & Outreach  
Specialist*  
Tina Reed – *Administrative Support Coordinator*

### CINMS Interns

Michael S. Henry – *Policy, Planning, and Resource Protection  
Intern*  
Crystal Lowe – *Water Quality Intern*

### NMSP West Coast Region Staff

William Douros – *Regional Superintendent*  
Matt Brookhart – *Policy Coordinator*  
Nicole Capps – *Management Support Specialist*  
Dave Lott – *Operations Coordinator*

### NMSP Staff

Columbine Culberg – *Ocean Etiquette Program Manager /  
Liaison to Aquarium of the Pacific*  
Claire Fackler – *West Coast Education Liaison*  
Sarah Marquis – *West Coast Media Coordinator*

### Channel Islands Marine Sanctuary Foundation

Donna Schroeder – *Acting Executive Director*

## Learn More About Your Sanctuary

The Channel Islands National Marine Sanctuary produces the Sanctuary Superintendent's Report in conjunction with bi-monthly Sanctuary Advisory Council meetings. To learn more about the sanctuary please visit our web site at: <http://channelislands.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:

<http://www.channelislands.noaa.gov/sac/main.html>.

## The National Marine Sanctuary Program

The National Marine Sanctuary System consists of 14 marine protected areas that encompass more than 150,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Northwestern Hawaiian Islands Marine National Monument." The NMSP, which manages the system, was established under the National Marine Sanctuaries Act of 1972. Visit the NMSP web site at: <http://www.sanctuaries.nos.noaa.gov/>.

## Channel Islands National Park

To learn about Channel Islands National Park visit their web site at: <http://www.nps.gov/chis/homepage.htm>.

## GET INVOLVED AND STAY INFORMED!

To learn how to get involved in the sanctuary visit:

<http://www.channelislands.noaa.gov/focus/involved.html>

Sign up for the CINMS listserv to receive email notices about upcoming sanctuary events, and public meetings of the Sanctuary Advisory Council and its working groups:

<http://www.channelislands.noaa.gov/focus/list.html>

## - CONTACT INFORMATION -

### Channel Islands National Marine Sanctuary

Santa Barbara Office  
Santa Barbara Harbor  
113 Harbor Way, Suite 150  
Santa Barbara, California  
93109  
Phone: (805) 966-7107  
Fax: (805) 568-1582

Oxnard Office  
Channel Islands Harbor  
3600 S. Harbor Blvd., Suite 111  
Oxnard, California  
93035  
Phone: (805) 382-6149  
Fax: (805) 382-9791

